Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-4, 6-11, and 13-30 are pending in the application, with claims 1, 8, 15, and 20 being the independent claims. Claims 5 and 12 were previously canceled. Claims 1-4, 6-11, and 13-25 are sought to be amended. New claims 26-30 are sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 103

The Examiner has rejected claims 1-4, 8-11, 15, 16, and 20-22 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,459,703 B1 to Grimwood *et al.* ("Grimwood") in view of U.S. Patent No. 4,926,420 to Shimizu ("Shimizu"). Based on the following remarks, Applicants respectfully traverse.

Applicants have amended independent claim 1 to recite the following:

> A method for networking a central controller with a first group of one or more remote devices operating in accordance with a first protocol and a second group of one or more remote devices operating in accordance with a second protocol, comprising:
>
> assigning one or more time slots on the same logical upstream channel during which said first group and second group of remote devices may transmit information to said central controller;
>
> distinguishing transmissions from said first group of remote devices from transmissions from said second group of remote devices based on said time slot assignments;

> routing said transmissions from said first group of remote devices to a first processor operating in accordance with said first protocol within said central controller; and
>
> routing said transmissions from said second group of remote devices to a second processor operating in accordance with said second protocol within said central controller.

Grimwood does not teach or suggest each of the foregoing features of claim 1, as amended. For example, Grimwood does not teach or suggest assigning one or more time slots *on the same logical upstream channel* during which said first group and second group of remote devices may transmit information to said central controller, and distinguishing transmissions from said first group of remote devices from transmissions from said second group of remote devices based on said time slot assignments, as recited in claim 1 and described in the specification of the present application. (See, e.g., page 14, line 35 to page 15, line 10).

Rather, Grimwood teaches assigning time slots *on different logical upstream channels* such that cable modems operating according to different protocols do not share the same logical channel. For example, Grimwood FIG. 3 shows multiple protocol-specific grant regions (i.e., SCDMA and TDMA regions), and describes how to prevent overlap between these protocol-specific grant regions/logical channels.

> Then, the SCDMA and TCDMA regions are defined for each logical channel by mapping minislots numbers to SCDMA and TDMA regions and making sure there is no overlap. ... Overlap between TDMA and SCDMA regions is prevented as follows. For the TDMA only logical channel, TDMA regions have minislots assigned to the SIDs that have bandwidth awards and a NULL SID which does not belong to any RU is mapped in the table to minislots that correspond to SCDMA regions in the SCDMA only logical channel. For the SCDMA only logical channel, SCDMA regions have minislots assigned to the SIDs that have bandwidth awards and a NULL SID which does not belong to any RU is mapped in the table to minislots that correspond to TDMA regions in the TDMA

> only logical channel. ...The results are illustrated in FIGS. 3, 4 and 5. (Grimwood at col. 10, line 66 to col. 11, line 9 and col. 11, lines 18-34).

Because Grimwood defines protocol-specific grant regions for protocol-specific logical channels, Grimwood distinguishes the protocol of each transmission based on which logical channel carries the transmission and not based on the time slot assignments. Thus, Grimwood fails to teach or suggest all of the features of independent claim 1, as amended. Similarly, Applicants have amended independent claim 8 to recite the following:

> A method for networking a cable modem termination system with a first group of one or more cable modems operating in accordance with a proprietary protocol and a second group of one or more cable modems operating in accordance with a DOCSIS protocol, comprising:
>
> assigning one or more time slots on the same logical upstream channel during which said first group and second group of cable modems may transmit information to said cable modem termination system;
>
> distinguishing transmissions from said first group of cable modems from transmissions from said second group of cable modems based on said time slot assignments;
>
> routing said transmissions from said first group of cable modems to a first processor that operates in accordance with said proprietary protocol within said cable modem termination system; and
>
> routing said transmissions from said second group of cable modems to a second processor that operates in accordance with the DOCSIS protocol within said cable modem termination system.

For the same reasons described above with respect to independent claim 1, Grimwood fails to teach or suggest all of the features of independent claim 8, as amended. At a minimum, Grimwood fails to teach or suggest "assigning one or more time slots on the same logical upstream channel during which said first group and second group of cable modems may transmit information to said cable modem termination system," and "distinguishing transmissions from said first group of cable modems from

transmissions from said second group of cable modems based on said time slot assignments," as recited in claim 8.

Applicants have also amended independent claim 15 to recite the following:

> A two way communication system comprising:
>
> a first group of one or more remote devices that communicate with a local host in accordance with a first protocol; and
>
> a second group of one or more remote devices that communicate with said local host in accordance with a second protocol,
>
> wherein said local host assigns one or more time slots on the same logical upstream channel during which said first and second groups of remote devices may transmit information to said local host,
>
> wherein said local host comprises a protocol processor for distinguishing transmissions from said first group of remote devices from transmissions from said second group of remote devices based on said time slot assignments, and
>
> wherein said protocol processor routes said transmissions from said first group of remote devices to a first processor operating in accordance with the first protocol and routes said transmissions from said second group of remote devices to a second processor operating in accordance with the second protocol.

For the same reasons described above with respect to independent claim 1, Grimwood fails to teach or suggest all of the features of independent claim 15, as amended. At a minimum, Grimwood fails to teach or suggest a local host that "assigns one or more time slots on the same logical upstream channel during which said first and second groups of remote devices may transmit information to said local host," and "comprises a protocol processor for distinguishing transmissions from said first group of remote devices from transmissions from said second group of remote devices based on said time slot assignments," as recited in claim 15.

Additionally, Applicants have amended independent claim 20 to recite the following:

> A cable television system, comprising:
>
> a first group of one or more cable modems that communicate with a cable modem termination system in accordance with a proprietary protocol; and
>
> a second group of one or more cable modems that communicate with said cable modem termination system in accordance with a DOCSIS protocol,
>
> wherein said cable modem termination system assigns one or more time slots on the same logical upstream channel during which said first and second groups of cable modems may transmit information to said cable modem termination system,
>
> wherein said cable modem termination system comprises a protocol processor for distinguishing transmissions from said first group of cable modems from transmissions from said second group of cable modems based on said time slot assignments, and
>
> wherein said protocol processor routes said transmissions from said first group of cable modems to a first processor operating in accordance with the proprietary protocol and routes said transmissions from said second group of cable modems to a second processor operating in accordance with the DOCSIS protocol.

For the same reasons described above with respect to independent claim 1, Grimwood fails to teach or suggest all of the features of independent claim 20, as amended. At a minimum, Grimwood fails to teach or suggest a cable modem termination system that "assigns one or more time slots on the same logical upstream channel during which said first and second groups of cable modems may transmit information to said cable modem termination system," and "comprises a protocol processor for distinguishing transmissions from said first group of cable modems from transmissions from said second group of cable modems based on said time slot assignments," as recited in claim 20.

Accordingly, Grimwood does not teach or suggest all of the features of independent claims 1, 8, 15, and 20, as amended. Furthermore, Shimizu does not supply

the missing teachings. At a minimum, any combination of Grimwood and Shimizu fails to teach or suggest a method or system for assigning one or more time slots on the same logical upstream channel during which remote devices (e.g., cable modems) operating according to different protocols may transmit information to a central controller (e.g., a local host or a cable modem termination system), and for identifying transmissions from the remote devices (e.g., cable modems) based on the time slot assignments.

Since neither Grimwood nor Shimizu, alone or in combination, teaches or suggests all of the limitations of claims 1, 8, 15, and 20, the combination of Grimwood and Shimizu fails to support a prima facie case of obviousness rejection of claims 1, 8, 15, and 20. Furthermore, the combination of Grimwood and Shimizu fails to support a prima facie case of obviousness rejection of claims 2-4, 9-11, 16, 21, and 22 for at least the same reasons as independent claims 1, 8, 15, and 20 from which they depend, and further in view of their own features. Likewise, the combination of Grimwood and Shimizu also fails to support a prima facie case of obviousness rejection of new claims 26-30 for at least the same reasons as independent claims 1, 8, 15, and 20 from which they depend, and further in view of their own features. Accordingly, the Examiner's rejection of claims 1-4, 8-11, 15, 16, and 20-22 under 35 U.S.C. § 103(a) is traversed and Applicants respectfully request that the rejection be reconsidered and withdrawn.

The Examiner has rejected claims 6, 7, 13, 14, 17-19, and 23-25 under 35 U.S.C. § 103(a) as being unpatentable over Grimwood in view of Shimizu, and further in view of U.S. Patent No. 6,751,230 B1 to Vogel *et al.* ("Vogel"). Based on the following remarks, Applicants respectfully traverse.

As described above, Grimwood does not teach or suggest all of the features of independent claims 1, 8, 15, and 20, as amended. Furthermore, Shimizu and Vogel do not supply the missing teachings. At a minimum, any combination of Grimwood, Shimizu, and Vogel fails to teach or suggest a method or system for assigning one or more time slots on the same logical upstream channel during which remote devices (e.g., cable modems) operating according to different protocols may transmit information to a central controller (e.g., a local host or a cable modem termination system), and for identifying transmissions from the remote devices (e.g., cable modems) based on the time slot assignments.

Since neither Grimwood, Shimizu, or Vogel, alone or in combination, teaches or suggests all of the limitations of claims 1, 8, 15, and 20, the combination of Grimwood, Shimizu, and Vogel fails to support a prima facie case of obviousness rejection of claims 6, 7, 13, 14, 17-19, and 23-25 for at least the same reasons as independent claims 1, 8, 15, and 20 from which they depend, and further in view of their own features. Likewise, the combination of Grimwood, Shimizu, and Vogel also fails to support a prima facie case of obviousness rejection of new claims 26-30 for at least the same reasons as independent claims 1, 8, 15, and 20 from which they depend, and further in view of their own features. Accordingly, the Examiner's rejection of claims 6, 7, 13, 14, 17-19, and 23-25 under 35 U.S.C. § 103(a) is traversed and Applicants respectfully request that the rejection be reconsidered and withdrawn.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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